

**ISCKMC 2020**  
**International Scientific Congress «KNOWLEDGE, MAN AND CIVILIZATION»**  
**FORMING PROSPECTIVE TOURIST RECREATION CLUSTERS**  
**IN THE ORENBURG OBLAST**

Valentina Petrovna Chibilyova (a)\*, Irina Yurievna Filimonova (b)

\*Corresponding author

(a) The Institute of the Steppe of the Ural Branch of the Russian Academy of Sciences – a separate structural unit of the Federal State Budgetary Institution of Science of the Orenburg Federal Research Center of the Ural Branch of the Russian Academy of Sciences, 11, Pionerskaya str., Orenburg, Russia, tina-chibilyova@mail.ru,

(b) The Institute of the Steppe of the Ural Branch of the Russian Academy of Sciences – a separate structural unit of the Federal State Budgetary Institution of Science of the Orenburg Federal Research Center of the Ural Branch of the Russian Academy of Sciences, 11, Pionerskaya str., Orenburg, Russia, filimo-irina@yandex.ru

### Abstract

Development of tourism and recreation is based on application of cluster approach by means of identifying prospective tourist recreation clusters, which was implemented by the authors through an example of a Russian near-border region, Orenburg oblast. Within the territory of the oblast, the authors have provisionally identified three ecological and economic zones (Western, Central and Eastern), basing on contrasting natural conditions, social, economic and environmental differences. In each zones clusters were identified as systems that bring together several tourist recreation objects and representing the following functional elements: proto-cluster (area) with a determining function of tourist activity, locality (node center). Authors also identify inter-regional Tanalik-Suunduk protocluster (with the dominant in the form of Iriklinisky reservoir basin) and Aland-Arkaim historical and cultural ribbon-dlike interregional proto-cluster representing an ancient Indo-Iranian settlement site, which is a part of the Land of Towns complex of settlements. In the south-east of the zone, an isolated regional cluster is identified, formed by several localities, Svetlinsk lakes (a key ornithological territory for development of ecological and scientific tourism) and Ashchisaysk steppe (a part of the Orenburgsky nature reserve with prospects for development of scientific and educational tourism). Scientifically justified cluster approach will facilitate rational use of recreational resources and development of tourism in the region.

2357-1330 © 2021 Published by European Publisher.

*Keywords:* Tourist recreation cluster, protocluster, Orenburg region



This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## 1. Introduction

Orenburg oblast is situated in the heartland of the common Eurasian space, at a border with Kazakhstan, in two parts of the work, Europe and Asia and in three natural zones: Russian plain, Ural highlands, Turgay plateau. This location of the region defines its natural recreational and ecosystemic diversity, contrasts and unique nature of its tourism and recreation resources. On condition of smart territorial management, scientific approach and taking into account certain factors (in particular socio-economic and resource ones), it is possible to create and develop several tourism and recreation clusters as a system consisting of specialized functional elements.

## 2. Problem Statement

Modern socio-economic situation in the Orenburg region with accounts for increasing interest to internal tourism on behalf of consumers of tourist products determines appearance of new strategic directions in development of a recreational complex.

One of priority directions is identification, formation, development and optimal selection of specificity for prospective tourism and recreation clusters. We hold that the cluster approach will allow increasing the efficiency of functioning of the tourism and recreation sector and strengthen its competitive positions.

## 3. Research Questions

In our study we consider formation and development of prospective tourism and recreation clusters from geographical point of view through an example of the Orenburg oblast, a Russian region. The cluster approach in the tourism sector assumes strengthening competitiveness through rational use of tourist resources by organizations and specialist directly or indirectly related to recreation sector.

### 3.1. Literature review

Problems of identification and functioning of tourism and recreation clusters were touched upon by a broad spectrum of specialists: economists, geographers, landscape specialists, city planners, etc. (Chibilev et al., 2017). A number of theoretical work were dedicated to innovation component of tourist clusters (García-Villaverde et al., 2017; García-Villaverde et al., 2020; Fundeanu & Badele, 2014; Séraphin et al., 2018). There are works with regional accent, from Russian scientists as well as from foreign ones. In particular, Małgorzata Borkowska presents a comparative analysis of functioning tourist clusters as identified by the author in the Eastern Poland macroregion (Borkowska-Niszczoła, 2015). There are works analyzing the activity of the Antalya tourist cluster (Arsezen-Otamisa & Yuzbasioglu, 2013) and some island clusters (Del Chiappa et al., 2018). There are theoretical and practical works dedicated to identification and formation of regional clusters in Perm krai and Altai krai. We are of an opinion that Russian geographic research on this topic is insufficient.

### **3.2. Tourist recreation clusters of the Orenburg region**

In our study we consider natural and recreational resources of the near-border Orenburg oblast that may be used for formation of tourist recreation clusters if some factors are taken into account. Attractiveness of existing resource and recreational combinations of complexes is largely determined by their natural preservation status and is a prerequisite for formation of ecological recreational cluster systems with a necessary regulatory framework ensuring reproduction of natural geosystems and satisfaction of recreational needs of the population. Application of a cluster approach is a prospective method for creating new tourist recreation structures with innovative directions, allowing supporting tourism business in interactions with science and education. Existence of a cluster system is a mechanism to attract investment to the regional economy.

## **4. Purpose of the Study**

The research objective was to identify prospective and forming regional tourist recreation clusters within the territory of the Orenburg oblast, with a special significance for the region and performing a number of functions: social-economic, environmental and recreation-commercial. Taking into account available assessments of tourism and recreation potential, infrastructural development, territorial structure of the region, environmental situation and a number of other factors, we provisionally identified several ecological-economic zones where formation and development of tourist recreation cluster is possible. We hold that the cluster system will improve the efficiency of the regional tourist market and strengthen its position in the Russian tourist sector.

## **5. Research Methods**

The study is based upon application of cluster approach as a method of area development by means of appropriate planning of the tourism sector, providing possibility to merge individual recreation facilities into a common system of recreation enterprises in the form of several clusters. In order to identify tourist recreation clusters we selected provisional regional ecological and economic zones with considerations for ecological and recreational differences (types and characteristics of recreational use of natural resources, a degree of alternation of the natural complexes, characteristics of natural and cultural resources, social-economic and environmental conditions). For each zone, we identified the most significant objects that form the prospective cluster, with identification of functional structures – a proto-cluster (area) with a dominant (target function of tourist activity) and a locality (a node center).

Tourist recreation clusters within each zone are classified according to the principle of environmental and geographical framework (ribbon-like, dispersed, isolated), by their territorial location (regional, inter-regional, trans-border). A mandatory conditions for creation of a tourist cluster lies in arrangement of a wide network of routes and existence of tourist streams.

Developed tourist routes link the tourist recreation objects together, thus forming a cluster. All the large tourist proto-clusters and localities of the identified clusters link linear formations – routes (motorways, waterways), nature trails, floodplain forests, picturesque broads, small objects, such as natural balneological features, as well as tourist camps providing transition of recreants.

## 6. Findings

Significant length of the Orenburg oblast from west to east (over 750 km) facilitates not only diversity and contrast of natural conditions but clearly shows socio-economic and ecological-recreational differences in its eastern, central and western parts. Thus, we provisionally identified three ecological and economic zones: Western, Central and Eastern.

Complex analysis of socio-economic and natural resource-related factors has shown territorial specificity of environmental and economic problems: average ecological potential, social and domestic conditions varying from satisfactory to good in the Western and Central parts of the oblast; reduced and low level of population health, underdeveloped social and domestic infrastructure in the Eastern part. Tourist recreation clusters formed under the influence of the stated factors may serve as stabilizers of environmental and economic balance in these territories.

In each ecological and economic zone, we identify the most important objects that significantly influence social, environmental and economic situation within this territory.

The Western ecological and economic zone is represented by a large band-like interregional scientific and educational cluster that includes three proto-cluster areas:

1. Soksky-Kinel forest-steppe proto-cluster with a dominant (key tourist center) represented by the manor of S. Aksakov, an operative tourist recreation facility, a memorial museum (natural and historic monument) with old buildings and a natural park created in the 18<sup>th</sup> century. This territory, including its natural and historic monuments of aesthetic forestry of the 18<sup>th</sup>–19<sup>th</sup> centuries, is an excursion space of natural, historic and cultural objects of cultural-educational and ecological tourism;

2. Kinel-Buzuluk interregional proto-cluster, whose dominant is represented by the Buzuluk Coniferous Forest national park, a unique pine woodlands in the steppe zone. Most villages, Buzuluk Coniferous Forest health resort and private tourist hostels are located within the woodlands. There has been already formed a system of active tourist routes of nature-oriented tourism (hiking, fishing), there are also possibilities for development of rural tourism. Existence of the health resort, hostels and various recreational resources jump start the development of two types of activities in the proto-cluster: resort and tourist recreation with the following directions: medical and health, scientific-educational, ecotourism;

3. Talovsk-Chagan interregional proto-cluster with the dominant in the form of the western part of the Orenburgsky Nature Resort (Talovsk steppe). Until mid-May, this wavy plain divided by hollows is covered with blooming Schrenk's tulips; it is rarely visited by tourists as it is a protected area where monitoring and studies of natural processes take place. However, after creation of Talovsky Steppe – Blue Syrt International Biosphere Reserve (covering surrounding areas of unplowed steppe : Gryzly and Blue Syrt nature limits in Samara oblast; Kholmankaya steppe, a rather large area of fescue-feathergrass steppe and locations of regular nesting grounds of bustard, as well as parts of fescue-feathergrass steppe in the Western-Kazakhstan oblast of Kazakhstan), this territory will be attractive not only for scientific-educational tourism and ecotourism, but will bring in additional tourist resources for development of ethnographic and rural tourism. In the future, when all these territories are united in a common tourist-recreation network, the proto-cluster gets a trans-border status.

Each proto-cluster may offer its own branded tourist product, mutually complementing each other in the regional system of tourist recreation and performing important social functions.

It the Central zone, it is possible to create a trans-border cluster consisting of several independent localities (tourism nodes), both existing and prospective ones, where isolated objects congregate. For example, there are large settlements, like Sol-Iletsk with its Salty Lakes health resort, Sazan settlement in Belyaevsky district with Orenburg Tarpania scientific-educational facilities (which host Przhivalski's horses), Ilek settlement with a prospective tourist recreation object, Ural Uryoma park. There are also narrative centers to well-developed route scenarios, like rafting on the Ural river or Sakmara river, and linear elements of tourist recreation, like floodplain valleys, floodplain forests (*uryoma*) that link these objects together. Each independent locality of the trans-border tourist recreation cluster provides functioning of certain types of recreation, representing a potential for complex interrelated development. It makes the cluster very attractive for tourists due to different, complementary types of tourist recreation activities. For example, health-centered recreation on Salty Lakes or water sports tourism (rafting on the Ural river) may be combined with scientific-educational and ecological tourism, by visits to steppe areas with diverse and unique steppe flora and fauna (Orlov steppe, Donguz steppe, Burtin steppe – a part of the Orenburg nature reserve), as well as with guided tours of numerous natural monuments that serve as kind of ecological-recreational passages, linking localities into a common trans-border tourist recreation cluster.

Within the territory of the zone there are many archaeological monuments (settlements, ancient sites) that promote creation of a Bronze Age Epoch historical-cultural proto-cluster with a dominant represented by Kargaly mines, an ancient mining and metallurgy complex, stretching for over 50 km and having a total area of over 500 km<sup>2</sup>. A set of mines that includes landscape, archaeological and historical monuments consists of 40 individual ancient and medieval mine workings. Kargaly mines are comparable by the scale of ancient mines to such famous mining and metallurgy complexes and Wadi Arabah in Timna valley at the border of Jordan and Israel (legendary King Solomon's mines) and Stradzha at the border of Bulgaria and Turkey. In the 3rd-2nd millennium BCE, copper from Kargaly was used to produce weapons, tools and jewelry. Copper minerals are mostly represented by malachite and azurite, as well as cuprite and native copper. The current name appeared only in mid-19th century, earlier the mines were known as Chud's mines and Old Orda mines. First description of the Chud's mines was provided by nature historian P.I. Rychkov. Collections of ancient fauna from Kargaly may be found in Mining University (Saint Petersburg), Paleontology Institute of RAS (Moscow), British Museum (London), museums of Berlin and Stuttgart (Germany).

Kargaly is a testing ground for various scientific research projects with international participation, practical training and business projects. Historical and cultural importance and natural attractiveness of the whole territory of Kargaly mines suggests creating a landscape historical reserve, which will serve as a unique center, simultaneously performing scientific, cultural, educational and tourist functions. Memorial museum dedicated to the history of mining in the region is planned at the location of Gorny settlement, former administrative and production center of the mines (Chibilev, 1999). The stated historical-cultural proto-cluster may with time obtain international significance.

In this zone we considered only the tourist recreation objects that in our opinion are capable of significant influence onto the social and economic development of the region.

The Eastern zone is represented with a significant, in our opinion, area with respect to recreation, where it is possible to create a prospective trans-border proto-cluster – a special protected nature territory Aytuar-Ebita steppe with a high level of biodiversity and dense tourist resources. Aytuar-Ebita steppe may be formed by merging the regional reserve Ebita on the left shore of the Ural river in the territory of the Republic of Kazakhstan with the bordering protected area of the Aytuar Steppe nature reserve in the Orenburg oblast. The prospective special protected nature territory Aytuar-Ebitin Steppe may become not only an important element of international cooperation in Orenburg-Kazakhstan region, but become a testing ground for joint projects. For example, it is possible to create a breeding center of steppe ungulates (Przewalski's horse, bison, boar), development of horseback tourist routes and ethnographic tours, organization of ecological educational backpacking trips for students to include picturesque landscapes and acquaintance with flora and fauna.

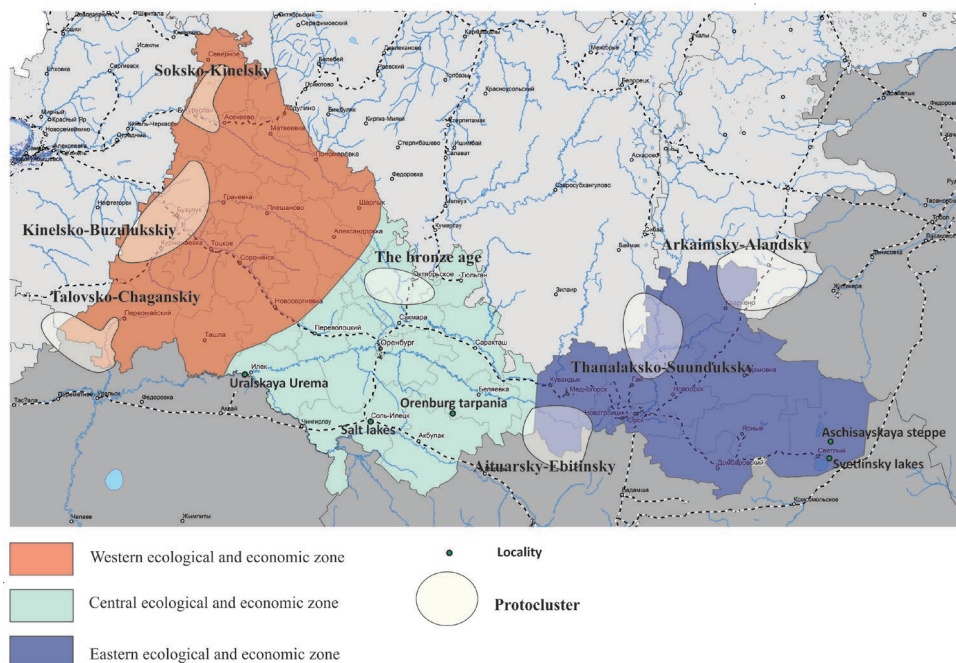
Tanalyk-Suunduk protocluster with Iriklinskoye reservoir basin as its dominant (at the border with Bashkortostan) is one of the more prospective tourist recreation objects in the Eastern zone. Iriklinskoye reservoir basin may provide a wide range of tourist services: amateur fishing, various types of water tourism (windsurfing, sailing, scuba diving and underwater hunting, cruising in boats and twin-hull boats), basket lunch and camping recreation are explored by both organized and independent tourists. There is a possibility for development of comfortable recreation, scientific-educational tourism and guided tours. According to estimates, 7000–9000 of recreants from nearby Bashkortostan visit the shores of the Iriklinskoye reservoir basin during the season.

Aland-Arkaim historical-cultural ribbon-like interregional proto-cluster (with equivalent dominants) is a site of an ancient Indo-Iranian settlement, which is a part of the archaeological complex of settlements, so-called Land of the Towns. Beginning of the late Bronze Age (2nd millennium BCE) was marked by mass migrations and long-range military interventions, resulting in creation of a number of towns and settlements. The most famous of the settlement sites is Arkaim (Chelyabinsk Oblast), which is actually older than the Pyramids of Egypt. Arkaim settlement and adjoining territory with a whole set of archaeological monuments from different eras is a natural landscape and historical-archaeological reserve, with a unique preservation of defensive structures, synchronous burials and integral historical landscape. Excavations include remains of warriors with weapons, various objects and parts of war chariots. As until recently this cultural layer was considered lost, it is possible that some of these monuments will be able to claim the status of world heritage objects. Numerous and diverse tourist streams (pilgrims, scientists, students, etc) in the territory of these excavated settlements (prospective site of Aland, and existing one of Arkaim) facilitate development of scientific archaeological and scientific-cognitive tourism in the form of expedition tours on the basis of field camps (participation in excavation and reconnaissance) and familiarization tours to excavations for all categories of tourists (in the form of city break), as well as multiple pilgrim tours.

In the south-east of this zone, it is possible to create ecological scientific educational regional cluster, formed by financially and organizationally independent localities that include Svetlinsky Lakes (locations of mass concentration and fly-over of migrating birds, allowing characterizing them as a key ornitological location for development of ecological and scientific tourism) and Ashchisai Steppe, a part

of the Orenburg nature reserve, where the protection regime allows organizing ecological and scientific-cognitive tourism in the buffer zone of the reserve (Figure 01).

Recreational development and creation of tourist recreation structures will be possible on condition of creating a common unified recreation system in the territory as a component of territory planning system and economic structure of the region.



**Figure 1.** [Tourist recreation clusters of the Orenburg region]

## 7. Conclusion

In the territory of the Orenburg oblast, with account for ecological, social-economic, resource and natural factors, we provisionally identified three ecological and economic zones, identifying in each of them prospective tourist recreation clusters, proto-clusters and localities of various specialization. In the Western zone we identified a band-like inter-regional scientific-educational cluster with the following directions of development: medical and health, cultural-cognitive, scientific-educational, ecotourism; In the Central zone, it is possible to create a trans-border cluster, with identification of localities (node centers) for ecological, scientific, medical and health tourism and a vast regional historical-cultural proto-cluster with subsequent international status. In the Eastern zone, it is possible to form a trans-border proto-cluster, a band-like inter-regional tourist recreational proto-cluster of historical-cultural direction and an isolated regional cluster of ecological and scientific-educational tourism. The identified prospective tourist recreation clusters (proto-clusters, localities), if adequately managed, are capable of improving the efficiency of the recreational economy of the region, strengthening its competitive advantages.

## Acknowledgments

This work was carried out as part of the state assignment AAAA-A17-117012610022-5.

## References

- Arsezen-Otamisa, P., & Yuzbasioglu, N. (2013). Analysis of Antalya Tourism Cluster Perceived Performance with Structural Equation Model. *Proc. – Soc. and Behavioral Sci.*, 99, 682–690. <https://doi.org/10.1016/j.sbspro.2013.10.539>
- Borkowska-Niszczota, M. (2015). Tourism Clusters in Eastern Poland – Analysis of Selected Aspects of the Operation. *Proc. – Soc. and Behavioral Sci.*, 213, 957–964. <https://doi.org/10.1016/j.sbspro.2015.11.511>
- Chibilev, A. A. (1999). *Geographic atlas of the Orenburg region*. DIC.
- Chibilev, A. A. (jr.), Grigorevsky, D. V., & Padalko, Y. A. (2017). On the formation of recreational and tourist clusters in the Orenburg region. *Advan. in modern natural sci.*, 12, 267–272.
- Del Chiappa, G., Atzeni, M., & Ghasemi, V. (2018). Community-based collaborative tourism planning in islands: A cluster analysis in the context of Costa Smeralda. *J. of Destin. Market. & Manag.*, 8, 41–48. <https://doi.org/10.1016/j.jdmm.2016.10.005>
- Fundeanu, D. D., & Badele, C. S. (2014). The Impact of Regional Innovative Clusters on Competitiveness. *Proc. – Soc. and Behavioral Sci.*, 124, 405–414. <https://doi.org/10.1016/j.sbspro.2014.02.502>
- García-Villaverde, P. M., Elche, D., & Martínez-Pérez, Á. (2020). Understanding pioneering orientation in tourism clusters: Market dynamism and social capital. *Tourism Manag.*, 76, 103966. <https://doi.org/10.1016/j.tourman.2019.103966>
- García-Villaverde, P. M., Elche, D., Martínez-Pérez, Á., & Ruiz-Ortega, M. J. (2017). Determinants of radical innovation in clustered firms of the hospitality and tourism industry. *Int. J. of Hospitality Manag.*, 61, 45–58. <https://doi.org/10.1016/j.ijhm.2016.11.002>
- Séraphin, H., Gowreesunkar, V., Roselé-Chim, P., Duplan, Y. J. J., & Korstanje, M. (2018). Tourism planning and innovation: The Caribbean under the spotlight. *J. of Destin. Market. & Manag.*, 9, 384–388. <https://doi.org/10.1016/j.jdmm.2018.03.004>